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# **REMEDIAL CONSTRUCTION WORK PLAN**

## **VOLUME I**

**TEXT, FIGURES**

**Summit National Superfund Site  
Deerfield Township of Portage County, Ohio**

**PRINTED ON**

**MAY 27 1993**

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**Summit National Superfund Site  
Deerfield Township of Portage County, Ohio**

**MAY 1993**

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**CONESTOGA-ROVERS & ASSOCIATES**

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- C3 GRADING PLAN
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- C8 FOUNDATION PLAN PILE LAYOUT
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## **1.0 INTRODUCTION**

### **1.1 BACKGROUND INFORMATION, PURPOSE AND ORGANIZATION OF REPORT**

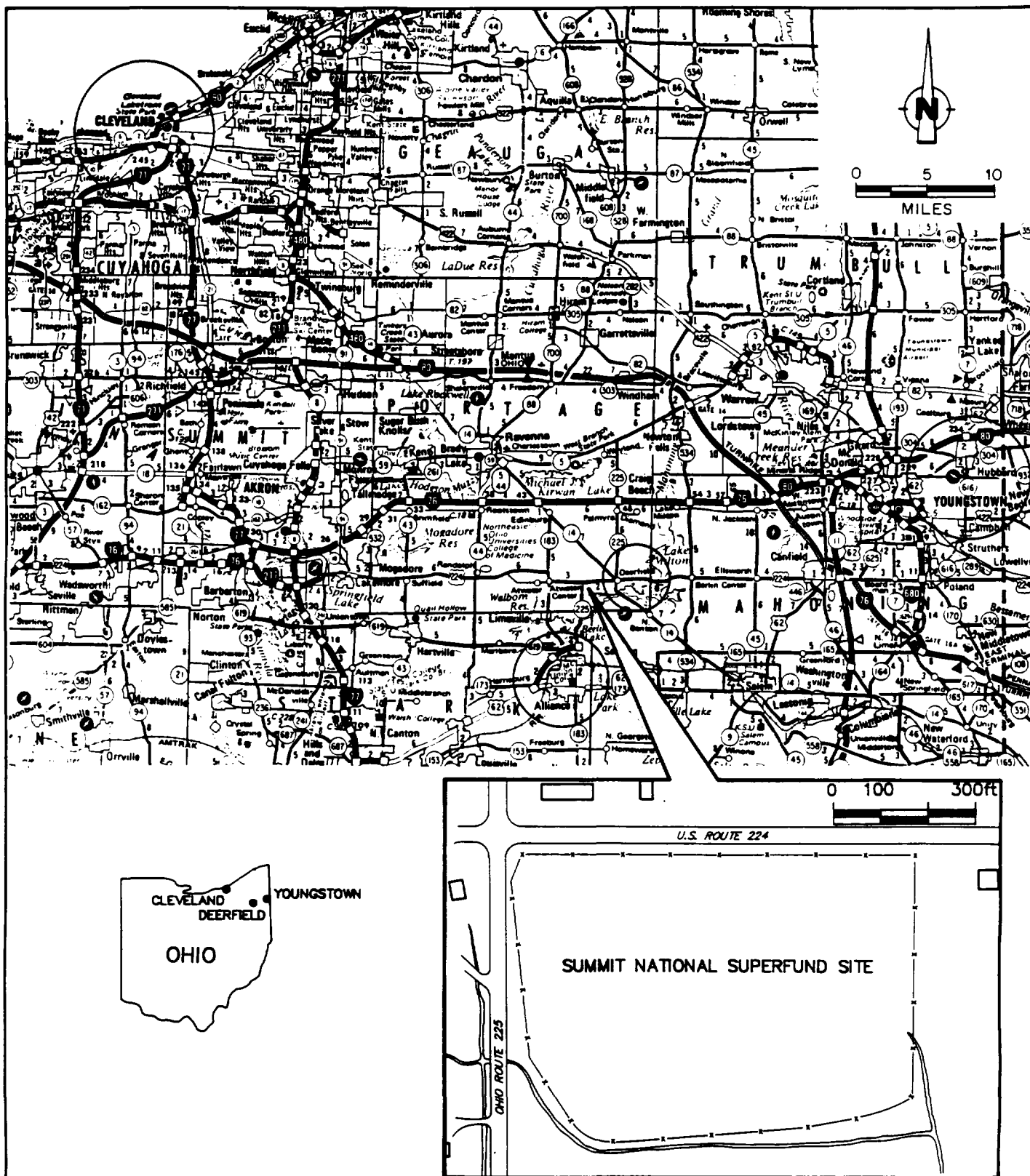
United States Environmental Protection Agency (USEPA), Ohio Environmental Protection Agency (OEPA) and Potentially Responsible Parties (PRPs) participated in negotiations leading to the Settling Defendants' agreement in 1988 to perform Remedial Design/Remedial Action (RD/RA) for the Summit National Superfund Site (Site) (see Figure 1.1 for Site location), which work is embodied in a Consent Decree and the Appendices thereto (Consent Decree). The Consent Decree became effective on June 11, 1991.

Pursuant to the Consent Decree, the Settling Defendants have formed the Summit National Facility Trust (SNFT) and have empowered the Trustees to provide for the performance of the RD/RA. Conestoga-Rovers & Associates (CRA) has been selected by SNFT as the primary consultant to SNFT for the RD/RA.

The first task associated with the RD/RA for the Site was the preparation and submittal of a RD Work Plan. The RD Work Plan was submitted to USEPA and OEPA on July 26, 1991 and was formally approved by OEPA and USEPA on November 14, 1991 and June 2, 1992, respectively.

The second task associated with the RD/RA for the Site was the preparation and submittal of a Design Criteria Document (DCD). The DCD was submitted to USEPA and OEPA on August 23, 1991 and was formally approved by USEPA and OEPA on June 2, 1992.

The third task associated with the RD/RA for the Site was the preparation and submittal of a Preliminary Design Report reflecting the design effort at 30 percent completion. The Preliminary Design Report was submitted to USEPA and OEPA on June 4, 1992, and was approved by USEPA and OEPA in a letter dated August 14, 1992 and received by CRA on August 17, 1992.



SOURCE: OHIO OFFICIAL TRANSPORTATION MAP, 1987

figure 1.1

**SITE LOCATION**  
**SUMMIT NATIONAL SUPERFUND SITE**  
*Deerfield Township of Portage County, Ohio*

**CRA**

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The fourth task associated with the RD/RA for the Site was the preparation and submittal of a Pre-Final Design Report reflecting the design effort at 95 percent completion. The Pre-Final Design Report was submitted to USEPA and OEPA on November 12, 1992.

The fifth task associated with the RD/RA for the Site was the preparation and submittal of a Draft Remedial Construction Work Plan (Draft RC Work Plan) presenting the implementation, management and sequencing of the remedial construction activities required to implement the RD for the Site as presented in the Pre-Final Design Report. The Draft RC Work Plan was submitted to USEPA and OEPA on November 12, 1992.

Comments on the Pre-Final Design Report and Draft RC Work Plan were received from USEPA and OEPA on January 27, 1993 and February 1, 1993, and it was agreed with USEPA on January 27, 1993 that SNFT's responses to USEPA and OEPA comments on the Pre-Final Design Report and Draft RC Work Plan would be submitted concurrently with the Final Design Report and RC Work Plan to USEPA and OEPA.

The sixth task associated with the RD/RA for the Site was the preparation and submittal of a Final Design Report reflecting the design effort at 100 percent completion. The Final Design Report was submitted to USEPA and OEPA concurrent with this report as required by the Consent Decree.

The RC Work Plan as presented herein, is submitted to USEPA and OEPA as the seventh task associated with the RD/RA for the Site. Pursuant to Paragraph E.6 Section VI of the Consent Decree, the RC Work Plan is not due until 30 days following USEPA and OEPA approval of the Draft RC Work Plan. This document is submitted on behalf of the Settling Defendants by the Trustees of the SNFT, pursuant to their authority under the trust agreement to provide for the performance of the RD/RA as required by the Consent Decree.

The RC Work Plan presents the implementation, management and sequencing of the remedial construction activities required to implement the RD for the Site as presented in the Final Design Report.

The RC Work Plan is organized as follows:

- i) Section 1 presents background information, the purpose and format of the RC Work Plan, includes a summary of the RA requirements for the Site as required by the Consent Decree, presents the project organization and the basis for the remedial construction to be performed at the Site;
- ii) Section 2 presents the existing physical conditions at the Site as determined during the pre-design activities;
- iii) Section 3 presents the access agreements required for implementation of the RA for the Site;
- iv) Section 4 presents the Health and Safety Plan for RC activities at the Site;
- v) Section 5 presents the construction management and sequencing of the RC activities to be performed at the Site;
- vi) Section 6 presents the work plan for implementation of the groundwater treatment system phase of the RA;
- vii) Section 7 presents the work plan for implementation of the groundwater extraction system phase of the RA;
- viii) Section 8 presents the work plan for implementation of the soil removal and treatment phase of the RA;
- ix) Section 9 presents the work plan for implementation of the final Site cover phase of the RA;

- x) Section 10 presents the work plan for installation of piezometers, monitoring wells and extraction wells, and abandonment of existing piezometers and monitoring wells;
- xi) Section 11 presents the draft long-term operation, maintenance and monitoring plan for the Site;
- xii) Section 12 presents the documentation and reporting requirements during implementation of the RC Work Plan;
- xiii) Section 13 presents the RC closeout;
- xiv) Section 14 presents the community relations requirements during implementation of the remedial construction activities; and
- xv) Section 15 presents the RA schedule.

The construction drawings referred to in the RC Work Plan consist of the following drawings:

- i) C. Groundwater Treatment System
  - C1 EXISTING CONDITIONS
  - C2 SITE WORK
  - C3 GRADING PLAN
  - C4 SITE SECTIONS
  - C5 SITE WORK DETAILS
  - C6 EROSION CONTROL
  - C7 CHEMICAL UNLOADING PAD
  - C8 FOUNDATION PLAN PILE LAYOUT

- C9 FLOOR PLAN
- C10 FOUNDATIONS SECTIONS
- C11 NORTH AND EAST ELEVATIONS
- C12 WEST AND SOUTH ELEVATIONS
- C13 SECTIONS AND DETAILS
- C14 STRUCTURAL ROOF PLAN
- C15 ROOM, DOOR AND WINDOW SCHEDULE
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- C18 MECHANICAL SECTIONS "A" AND "D"
- C19 HYDRAULIC GRADIENT
- C20 HVAC AND PLUMBING LAYOUT
- C21 SITE ELECTRICAL SERVICE
- C22 LIGHTING AND RECEPTACLES
- C23 MOTOR AND DISCONNECT LOCATION DRAWING
- C24 MCC LAYOUT AND SINGLE LINE DIAGRAM
- C25 PLC I/O LAYOUT
- C26 PLC I/O CABINET AND CONTROL STATIONS
- C27 PROCESS AND INSTRUMENTATION SCHEMATIC

ii) D. Groundwater Extraction System

- D-1 EXISTING CONDITIONS
- D-2 SITE PREPARATION AND DEMOLITION
- D-3 SITE WORK
- D-4 GRADING PLAN
- D-5 PIPE AND MEDIA DRAIN PROFILE
- D-6 TYPICAL DETAILS I
- D-7 TYPICAL DETAILS II
- D-8 TYPICAL SECTIONS

iii) E. Soil Removal and Treatment

- E-1 EXISTING CONDITIONS
- E-2 SITE PREPARATION AND DEMOLITION

E-3 EXCAVATION

- E-4 TYPICAL DETAILS
- E-5 GRADING PLAN
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- E-7 CROSS-SECTIONS 0 AND 100
- E-8 CROSS-SECTIONS 200 AND 300
- E-9 CROSS SECTIONS 400 AND 500
- E-10 CROSS-SECTIONS 600 AND 700

iv) F. Site Cover

- F-1 EXISTING CONDITIONS
- F-2 FINAL GRADING PLAN
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iv) G. Well Installation and Abandonment

- G-1 EXISTING CONDITIONS
- G-2 SITE WORK
- G-3 REMEDIAL CONSTRUCTION WORK AREAS
- G-4 FINAL GRADING PLAN
- G-5 WELL DETAILS
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EXTENSION DETAIL

Drawings "C" to "F" are presented consistent with the schedule of activities presented in the Consent Decree, and are grouped according to the four phases of remediation to be implemented at the Site as presented on Figure 2 of the Statement of Work (SOW) attached to the Consent Decree, and as further detailed in this RC Work Plan. Drawings "G" present the installation/abandonment details for piezometers, monitoring wells and extraction wells for the Site.

The RC Work Plan consists of five volumes and the Construction Drawings as follows:

- i) Volume I - Text, Figures;
- ii) Volume II - Appendices A and B;
- iii) Volume III - Appendices C to F;
- iv) Volume IV - Appendices G to K;
- v) Volume V - Appendix L;
- vi) Construction Drawings C1 to C27 - Groundwater Treatment Systems;
- vii) Construction Drawings D-1 to D-8 - Groundwater Extraction System;
- viii) Construction Drawings E-1 to E-10 - Soil Removal and Treatment;
- ix) Construction Drawings F-1 to F-3 - Site Cover; and
- x) Construction Drawings G-1 to G-6 - Well Installation and Abandonment.

## 1.2 PROPOSED REMEDIAL ACTION

The RA to be implemented at the Site is detailed in Appendix B of the Consent Decree, a document entitled "Statement of Work and Appendices to Statement of Work, Appendix A - Soil Removal and Treatment, Appendix B - Groundwater Extraction System, Appendix C - Site Cover, Appendix D - Groundwater Treatment System, Appendix E - Schedule of Activities, Summit National Superfund Site, Deerfield Township of Portage County, Ohio", printed on December 14, 1989. The SOW delineates and describes in detail the RA to be implemented at the Site. Through the design process, USEPA and OEPA have approved several modifications to the RA detailed in the SOW.

Therefore, the major components of the RA to be implemented at the Site consist of the following:

- i) excavation and placement on Site of off-Site contaminated impoundment and drainage ditch sediments (which was completed by SNFT as an interim response action in October 1991);
- ii) design, installation and long-term operation and maintenance of a water treatment system to treat extracted groundwater and water from

pond dewatering, perimeter sediment dewatering and construction dewatering operations;

- iii) installation and long-term operation and maintenance of a groundwater extraction system for hydraulic containment, collection and extraction of Site-related contaminated groundwater, consisting of an overburden pipe and media drain installed along the southern boundary of the Site and extending north along the east and west boundaries of the Site, a bedrock well system of six extraction wells along the alignment of the overburden pipe and media drain and conversion of two existing on-Site monitoring wells to temporary extraction wells;
- iv) installation and long-term maintenance of an 8-foot high chain link fence to secure the Site;
- v) excavation and on-Site incineration of on-Site contaminated soils, pond sediments, buried containerized contaminated materials and contaminated soils associated with buried containerized materials, stockpiled contaminated soils from the 1987 USEPA emergency response action, and off-Site east-perimeter contaminated soils;
- vi) removal of buried drums, containers and underground tanks;
- vii) demolition of on-Site buildings and structures to grade with placement of the resultant debris under an on-Site cap;
- viii) installation and long-term maintenance of a 2-foot thick permeable vegetated soil cap over the Site;
- ix) implementation of access/deed restrictions;
- x) implementation of an effectiveness groundwater monitoring program, including installation of additional monitoring wells and piezometers, hydraulic monitoring and groundwater quality monitoring;

- xi) monitoring of Site surface runoff; and
- xii) closing of the Tipple well and existing monitoring wells and piezometers not required for long-term monitoring of the effectiveness of the groundwater remediation.

Following USEPA and OEPA approval of the RD, the Consent Decree provides for implementation of the RA in four phases, as follows:

- i) groundwater treatment system, to be completed within 300 days of USEPA and OEPA approval of the RD and the RC Work Plan;
- ii) groundwater extraction system, to be completed within 300 days of USEPA and OEPA approval of the RD and the RC Work Plan;
- iii) soil removal and treatment, to be completed within 975 days of USEPA and OEPA approval of the RD and the RC Work Plan; and
- iv) Site cover, to be completed within 285 days of completion of item iii) above.

### 1.3 PROJECT ORGANIZATION

Pursuant to the Consent Decree the Settling Defendants have formed the SNFT and have empowered the Trustees to provide for the performance of the RD/RA. CRA was the primary consultant to SNFT for the pre-design investigation and the RD portion of the RD/RA, and is anticipated to perform the construction management during implementation of the RA for SNFT. Additional subcontractors will be selected to perform specific tasks during the RA phase of the RD/RA. Project organization charts for the remedial construction activities are provided in the Quality Assurance Project Plans for construction activities, presented as Appendices D, F, H and J, for each phase of the remedial construction.

#### 1.4 BASIS FOR REMEDIAL CONSTRUCTION

The remedial construction for the RA selected for the Site is based on the provisions of the Consent Decree and the SOW attached thereto, USEPA Superfund Remedial Design and Remedial Action Guidance, the final design for the RA of the Site as presented in the Final Design Report, and other appropriate guidances that may be provided by USEPA.

## **2.0 EXISTING CONDITIONS**

The Site is located in Deerfield Township of Portage County, Ohio, at the intersection of Ohio Route 225 and U.S. Route 224, approximately 45 miles southeast of Cleveland, Ohio, and 20 miles west of Youngstown, Ohio. The property comprising the Site consists of 11.22 acres and is approximately rectangular in shape.

Prominent features remaining at the Site from previous operations include a 15-foot high coal tipple, loading dock, scale house and concrete debris in the northwest corner of the Site, two ponds in the midsection of the Site, and an abandoned incinerator and two buildings in the southeast corner of the Site. Debris from the demolition of two abandoned buildings in the northeast corner of the Site and sediment stockpiles from the October 1991 removal of sediment from the Site perimeter ditches and the impoundment southeast of the Site remain in the northeast corner of the Site. Little vegetation remains at the Site since most of the Site was graded following previous surface cleanup activities performed at the Site.

A 6-foot high chain-link fence with three strands of barbed wire across the top secures 9.76 acres of the Site, with two locked gates from U.S. Route 224 and one locked gate from Ohio Route 225 for entrance. In addition, in December 1991 SNFT completed installation of a temporary fence to secure the east-Site perimeter grids.

The existing Site conditions as determined during the pre-design activities are reported in Technical Memorandum 2(TM-2) and are presented on Drawing A-1 included with the Final Design Report and on Drawing C-1 of the construction drawings included with this report. Cross-sections of the Site coincident with the north/south grid lines are presented on Drawings A-2 to A-7 inclusive, included with the Final Design Report.

### **3.0 ACCESS AGREEMENTS**

Implementation of the RA for the Site requires access onto adjacent properties. All access agreements have been obtained for implementation of the RA on the properties adjacent to the Site, as required for implementation of the RA. These access agreements are shown on Drawing B-1 of the Final Design Report and copies of the access agreements are included in Appendix A.

#### **4.0 HEALTH AND SAFETY PLAN**

A Health and Safety Plan (HSP) is required to ensure that all remedial construction activities are performed safely and in accordance with applicable regulatory requirements, and that all persons on Site, the general public and the environment are protected from exposure to Site-related contaminated material during implementation of the remedial construction activities at the Site. A HSP has been developed for the remedial construction activities associated with the RA for the Site and is presented in Appendix B.

Each employer involved in remedial construction activities at the Site will be required to develop and implement their own Site-specific HSP for activities they will perform at the Site. The HSP included in Appendix B will form the basis and minimum requirements for each employer's Site-specific HSP.

## **5.0 SITE MANAGEMENT AND SEQUENCING**

### **5.1 PHASES OF REMEDIAL CONSTRUCTION**

The four phases for implementation of the remedial construction at the Site as required by the Consent Decree are as follows:

- Phase I - construction of the on-Site groundwater treatment system;
- Phase II - construction of the groundwater extraction systems, including relocation/construction of the south and east perimeter drainage ditches;
- Phase III - excavation and on-Site treatment of on-Site and east-Site perimeter soils, pond sediments and buried containerized materials, if applicable, coincident with pre-grading of the Site; and
- Phase IV - construction of the final Site cover.

Installation/abandonment of monitoring wells and piezometers and installation of extraction wells will be performed by a specialist contractor and has therefore been removed from Phase II of the remedial construction activities. Well and piezometer installation and abandonment will occur concurrently with Phase I, II and III of the remedial construction activities at the Site.

A detailed description of the activities and sequencing for each phase of the remedial construction and well installation/abandonment are presented in Sections 6.0 to 10.0.

### **5.2 REMEDIAL CONSTRUCTION SEQUENCING**

Management of the Site during implementation of the remedial construction will be required to ensure that the Site operates in an

orderly, efficient and safe manner, and to ensure that the remedial construction is successfully implemented in accordance with the RD. The tasks to complete the four phases of the remedial construction have been sequenced to meet the following major objectives:

- i) all tasks should be performed in an orderly and safe manner such that the movement and double handling of materials and the exposure of personnel and the public to Site-related contaminants is minimized;
- ii) all tasks should be scheduled such that movement of contaminated materials over clean grid squares is minimized or avoided, and sequencing of tasks should result in the exclusion zone diminishing in size as the RA is implemented;
- iii) excavation for installation of the wet well and the pipe and media drain should only commence after final commissioning of the groundwater treatment facility so that groundwater entering the wet well and pipe and media drain excavations can be removed and treated at the on-Site groundwater treatment facility as required by the Consent Decree;
- iv) due to the limited space available at the Site, the selected soil removal and treatment contractor should only mobilize to the Site after the selected groundwater treatment system contractor has demobilized from the Site;
- v) the soil/sediment/drum excavation and treatment operations, where possible, should commence from the west of the Site towards the east such that stormwater runoff, which essentially occurs from west to east, will not be directed from contaminated to clean or excavated grid squares;
- vi) tasks should be performed to encourage stormwater infiltration. This would serve the dual purpose of preventing potentially contaminated run-off from leaving the Site and promoting the flushing of residual contaminants from the soil to the pipe and media drain; and

- vii) upon completion of the pre-grading activities, the contractor selected to complete the final soil cover should perform the work under conditions not requiring air monitoring or decontamination activities.

Sequencing of the remedial construction tasks within the four phases of remedial construction and well installation/abandonment are presented in Sections 6.0 to 10.0.

### 5.3 REMEDIAL CONTRACTOR SELECTION

Remedial contractors will be selected by a competitive bidding process. Separate bids will be solicited from qualified remedial contractors for performance of each phase of the remedial construction and for installation/abandonment of wells. A Contract reflecting the requirements of the RC Work Plan, the Final Design Report, the Consent Decree and standard contract administration requirements will be entered into by SNFT and the successful remedial contractor for each phase of the remedial construction.

### 5.4 SITE MANAGEMENT

All Site activities related to the remedial construction will be supervised by a qualified engineer. Daily logs will be maintained for all activities occurring at the Site during remedial construction activities. Besides continuous daily monitoring of the remedial construction activities, weekly progress meetings will be conducted with each remedial contractor and monthly progress meetings will be conducted with each remedial contractor, SNFT, USEPA and OEPA. Details of Site management during implementation of the remedial construction activities are presented in the RC QAPP's included in Appendices D, F, H and J.

## **6.0 GROUNDWATER TREATMENT SYSTEM**

### **6.1 STATEMENT OF WORK**

The first phase of the RA to be implemented at the Site, as required by the Consent Decree, is the construction and commissioning of a groundwater treatment system at the Site, and associated activities. The groundwater treatment system is to be completed within 12 months of USEPA and OEPA approval of the Final Design Report. Installation of the groundwater treatment system phase of the RA consists of the following activities:

- i) mobilization of labor, plant, materials and equipment to the Site;
- ii) development and implementation of a Site-specific Health and Safety Plan by the selected remedial contractor for construction of the groundwater treatment system;
- iii) placing clean soil in Grids 1-3, 1-4 and 1-5 to create a clean, level area for location of temporary Site offices and parking during implementation of the RA;
- iv) installation of temporary support facilities (Site offices, support trailers, toilet facilities, etc.);
- v) collection and restaging existing drums on Site at the temporary drum staging area in Grid 2-4 (for drums containing liquids) or at the temporary stockpile area in Grids 4-1, 4-2, 5-2, 5-3 and 6-3 (for drums containing solids);
- vi) demolition of the coal tipple structures in Grids 1-3 and 2-3, reducing concrete debris to manageable size pieces, and transporting and stockpiling soil and debris to temporary stockpiles in Grids 4-1, 4-2, 5-2, 5-3 and 6-3;

- vii) construction of a vehicle-decontamination facility in Grid 2-3, and installation of a personnel hygiene facility in Grid 2-3;
- viii) loading and transporting existing sediment stockpiles in Grids 1-6, 1-7 and 2-7, and the rubble/grubbing stockpile in Grid 2-7, to temporary stockpiles in Grids 4-1, 4-2, 5-2, 5-3 and 6-3;
- ix) rerouting of the existing surface water drainage pathway through Grid 2-7 by excavating a temporary drainage ditch from Grid 1-6, through Grid 2-6, to discharge into the east pond;
- x) partial dewatering of the east pond, if required, to:
  - a) allow removal of two feet of pond sediments from the tip of the pond entering Grids 2-7 and 2-8, and
  - b) install a temporary soil berm in Grid 2-7 to ensure water from the east pond remains outside the work area;
- xi) excavation of pond sediments from the tip of the pond entering Grids 2-7 and 2-8 and placing sediments at the contaminated soil staging area in Grids 2-4, 2-5 and 2-6;
- xii) excavation and regrading of the work area in Grids 1-6, 1-7, 1-8, 2-7 and 2-8 to pregrade elevations, where required, and placing of a 6-inch layer of clean imported soil over the work area;
- xiii) installation of a new access gate in the existing perimeter security fence for permanent access to the groundwater treatment building;
- xiv) excavation and installation of foundations for the groundwater treatment building;
- xv) construction of the groundwater treatment building, offices and maintenance rooms;
- xvi) installation and commissioning of utilities to the groundwater treatment building;

- xvii) installation of the groundwater treatment equipment and controls;
- xviii) construction of the groundwater treatment facility discharge pipe and rip-rap apron;
- xix) importation of clean common fill and placing common fill to pre-grade elevations in Grids 1-7, 1-8, 2-7 and 2-8;
- xx) importation and placing of clean material for the permeable 2-foot thick final Site cover and vegetation in Grids 1-7, 1-8, 2-7 and 2-8;
- xxi) commissioning the groundwater treatment system; and
- xxii) demobilization of labor, plant, materials and equipment from the Site.

The pre-final design for the groundwater treatment system is presented in Section 6.0 of the Final Design Report, in the construction specifications for the groundwater treatment system included in Appendix C, and on the "C" Drawings.

## 6.2 CONSTRUCTION SPECIFICATIONS AND DRAWINGS

Construction specifications for implementation of the groundwater treatment system phase of the remedial construction at the Site are presented in Appendix C. The construction drawings forming part of these construction specifications are identified by the "C" drawing numbers listed in Section 1.0 and are included under separate binding.

## 6.3 REMEDIAL CONSTRUCTION QUALITY ASSURANCE PROJECT PLAN

The remedial construction Quality Assurance Project Plan (RC QAPP) for installation of the groundwater treatment system phase of the

remedial construction, as required by the Consent Decree, is provided in Appendix D. Where applicable, the requirements of the RC QAPP have been incorporated into the construction specifications.

#### 6.4 IMPLEMENTATION AND SEQUENCING

##### 6.4.1 Site Preparation and Demolition

Prior to commencing remedial construction activities at the Site, a clean 6-inch layer of soil/gravel will be placed in the Site office and parking areas in Grids 1-3, 1-4 and 1-5 to create a clean, level area for location of temporary Site offices and parking, as shown on Drawing C2.

Site offices and support facilities then will be installed including power and telephone hookups. Temporary piping from the potable water supply well to a potable water storage tank located at the Site offices and personnel decontamination facility will be installed.

The coal tipple structures in Grids 1-3 and 2-3 will be demolished. All debris resulting from the demolition of the coal tipple structures will be reduced to manageable size pieces and the soil and debris will be relocated to temporary stockpile areas in Grids 4-1, 4-2, 5-2, 5-3 and 6-3, as shown on Drawing C2. Existing on-Site drums within the work area and in the areas required for access to the temporary stockpile areas will be relocated to the temporary drum staging area in Grid 2-4 (drums containing liquids) or to the temporary stockpile area (drums containing solids), as shown on Drawing C2. Drums containing solids will be opened at the temporary stockpile area, the contents emptied onto the temporary stockpile and the drum carcasses will be crushed for future burial under the final Site cover. Erosion control features as shown on Drawing C6 also will be installed.

Stockpiled sediments and rubble currently in Grids 1-6, 1-7 and 2-7 then will be relocated to the temporary stockpile areas in Grids 4-1, 4-2, 5-2, 5-3 and 6-3, to allow for the construction of the groundwater

treatment plant. The groundwater treatment facility construction area delineated on Drawing C3 then will be graded to the final Site cover pregrade elevations, and a nominal clean soil cover then will be placed to create a clean work area.

The existing surface drainage pathway through Grid 2-7 will be rerouted through Grid 2-6 as shown on Drawing C3. In addition, sediments from the northeastern tip of the east pond will be removed to the limits of the groundwater treatment facility construction area. Depending on the water level in the pond at the time of construction, it may be necessary to pump some water from the east pond to the west pond to facilitate the partial sediment removal. Contaminated soils from the reditching through Grid 2-6 and sediments removed from the east pond will be placed in the contaminated soil staging area in Grid 2-6 as shown on Drawing C2. A new permanent access gate also will be installed in the perimeter security fence as shown on Drawing C6.

#### 6.4.2 Construction and Commissioning of Groundwater Treatment System

Construction of the groundwater treatment building and system then will commence, including construction of the discharge pipeline, outlet structure and rip-rap apron as shown on the "C" construction drawings. The groundwater treatment system then will be commissioned as detailed in the Draft Operation and Maintenance Plan presented in Section 11.0.

#### 6.4.3 Construction of Final Soil Cover

The final soil cover, including the gravel access road and vegetation also will be completed within the limit of work area for construction of the on-Site groundwater treatment facility as delineated on Drawing C3.

#### 6.4.4 Construction Closeout

On completion of the activities associated with construction of the groundwater treatment facility, all construction equipment and support facilities with the exception of Site offices provided for SNFT, USEPA and OEPA, will be removed from the Site.

#### 6.5 SCHEDULE OF ACTIVITIES

The schedule of activities for implementation of the groundwater treatment system phase of the remedial construction activities at the Site is presented on Figure 6.1.

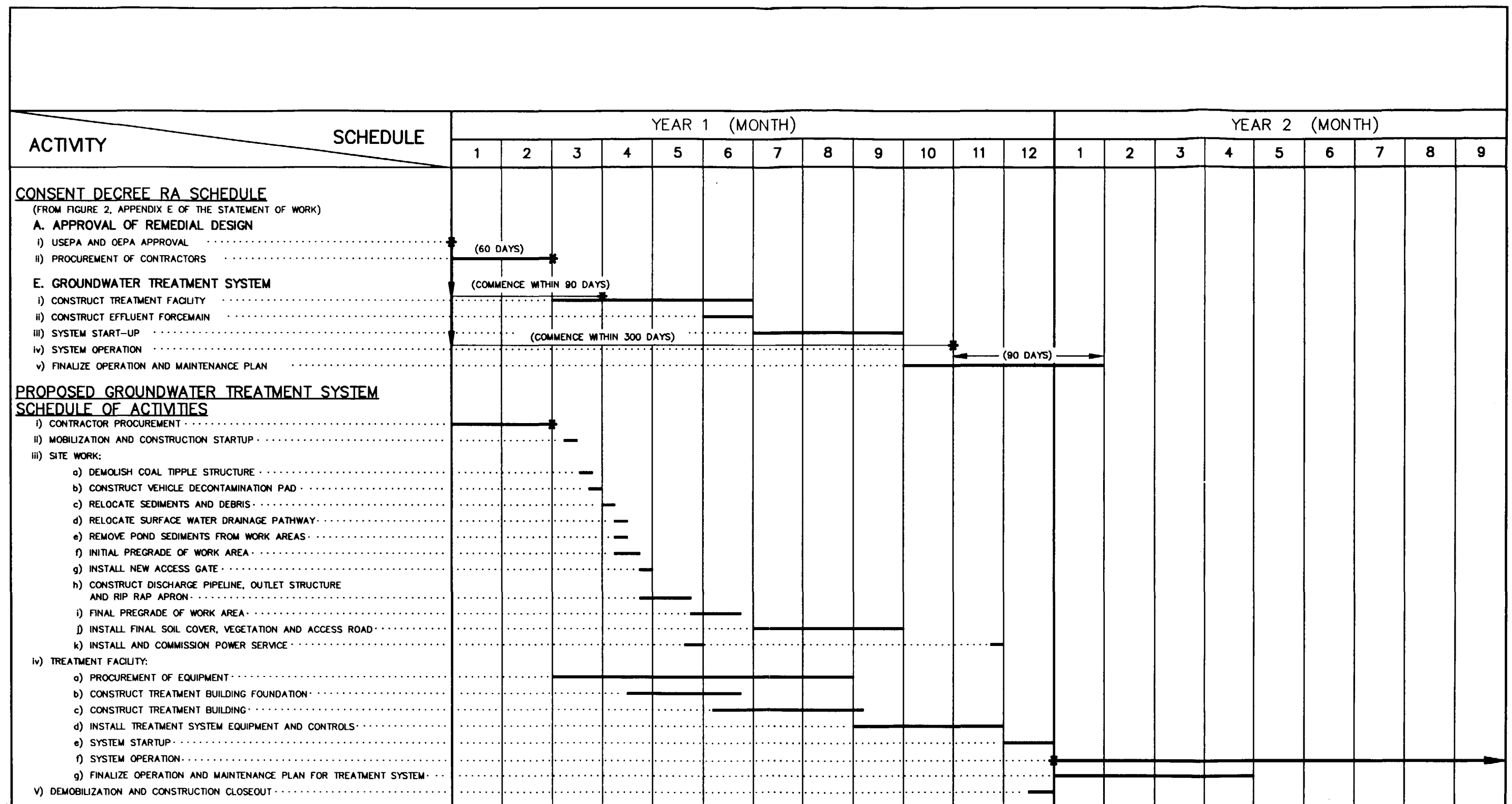


figure 6.1  
 REMEDIAL CONSTRUCTION SCHEDULE OF ACTIVITIES  
 GROUNDWATER TREATMENT SYSTEM  
 SUMMIT NATIONAL SUPERFUND SITE  
 Deerfield Township of Portage County, Ohio

## **7.0 GROUNDWATER EXTRACTION SYSTEM**

### **7.1 STATEMENT OF WORK**

The second phase of the RA to be implemented at the Site, as required by the Consent Decree, is the construction and commissioning of a groundwater extraction system at the Site, and associated activities. The groundwater extraction system is to be completed within 18 months of USEPA and OEPA formal approval of the Final Design Report. Installation of the groundwater extraction system phase of the RA consists of the following activities:

- i) mobilization of labor, plant, materials, equipment and temporary support facilities to the Site;
- ii) development and implementation of a Site-specific Health and Safety Plan by the selected remedial contractor for construction of the groundwater extraction system;
- iii) relocation of the south drainage ditch;
- iv) relocation of the south perimeter security fence;
- v) partial dewatering of the east pond to facilitate the following activities:
  - a) removal of 2-foot depth of pond sediments from the work area of Grids 2-8, 3-8 and 4-8, and stockpiling the sediments at the contaminated soil staging area in Grids 2-4, 2-5 and 2-6, and
  - b) relocation of the east pond retaining wall to outside of the work area;
- vi) excavation of the top two feet of contaminated soils from Grids 1-9 and 5-9, and from sections of Grids 4-8, 6-4, 6-6 and 6-7 within the work area, and transportation and temporary stockpiling of contaminated soils and sediments at the contaminated soil staging area in Grids 2-4, 2-5 and 2-6;

- vii) importation and placing of two feet of clean common fill in Grids 1-9 and 5-9, and vegetating these grids;
- viii) demolition to grade of the Watson house in Grid 1-9;
- ix) regrading along the alignment of the proposed pipe and media drain to create a level work area;
- x) installation of the wet well manhole in Grid 6-5, including temporary pumping facilities to the on-Site groundwater treatment facility, and startup of groundwater extraction;
- xi) excavation, placing and backfilling of the pipe and media drain commencing at the wet well, including access manholes along the alignment of the pipe and media drain;
- xii) installation of forcemains and control and power conduits;
- xiii) regrading of the work area to the Site cover final pregrade elevations;
- xiv) importation and placing of clean material for the permeable 2-foot thick final Site cover, including the gravel maintenance road and topsoil, and vegetating the groundwater extraction system work area;
- xv) construction of the rip-rap lined east ditch;
- xvi) replacement of the security fence removed to facilitate construction;
- xvii) installation of the extraction wells, wet well and access manhole mechanical and electrical components;
- xviii) commissioning the entire groundwater extraction system; and
- xix) demobilization of labor, plant, materials and equipment from the Site.

The pre-final design for the groundwater extraction system is presented in Section 6.0 of the Final Design Report, in the construction specifications for the groundwater extraction system included in Appendix E, and on the "D" Drawings.

## **7.2    CONSTRUCTION SPECIFICATIONS AND DRAWINGS**

Construction specifications for implementation of the groundwater extraction system phase of the remedial construction at the Site are presented in Appendix E. The construction drawings forming part of these construction specifications are identified by the "D" drawing numbers listed in Section 1.0 and are included under separate binding.

## **7.3    REMEDIAL CONSTRUCTION QUALITY ASSURANCE PROJECT PLAN**

The RC QAPP for installation of the groundwater extraction system phase of the remedial construction, as required by the Consent Decree, is provided in Appendix F. Where applicable, the requirements of the RC QAPP have been incorporated into the construction specifications.

## **7.4    IMPLEMENTATION AND SEQUENCING**

### **7.4.1    Site Preparation**

Site offices and support facilities will be placed in Grids 1-3, 1-4 and 1-5. The groundwater extraction system work area will be cleared and grubbed and security fences will be relocated as necessary. The equipment decontamination facility will have been installed by the groundwater treatment system remedial contractor. The groundwater extraction system contractor may modify these facilities to meet his specific

needs, however the support area will be located and setup as shown on Drawing D-1.

#### 7.4.2 East Pond Retaining Wall Relocation

The east pond retaining wall will be relocated to provide access to install the eastern segment of the pipe and media drain and access road. The east pond will be dewatered as necessary, by pumping the water to the west pond if volume is available, or to the groundwater treatment system for treatment prior to off-Site discharge. Two feet of sediment will be removed from the section of the east pond affected by relocation of the pond retaining wall. The removed sediment will be transported to and stockpiled at the contaminated soil staging area at Grids 2-4, 2-5 and 2-6. The east pond retaining wall then will be reconstructed at its new location using excess material from the existing retaining wall and the coal tipple area, and/or imported material as appropriate. This will allow the east pond to be maintained during the remedial construction activities to provide on-Site stormwater control and containment.

#### 7.4.3 Contaminated Soil/Sediment Removal and Demolition

Initially, the top two feet of soil from contaminated Grids 1-9, 5-9, 4-8, 6-4, 6-6 and 6-7, within the construction area delineated on Drawing D-2, will be excavated and transferred to the soil staging area shown on Drawing D-2, pending treatment. Grids 1-9 and 5-9 then will be backfilled to original grade with imported clean common fill and topsoil, and seeded, completing remediation of the east-Site perimeter soils. Following excavation of contaminated soils from Grid 1-9, the existing abandoned house on Grid 1-9 will be demolished, and the rubble will be reduced to minimum volume. All demolition rubble from the abandoned house will be transported to and disposed of at an off-Site sanitary landfill or used as fill material under the on-Site final Site cover.

#### **7.4.4 South Ditch Relocation and East Ditch Construction**

The east drainage ditch will be reconstructed and the south drainage ditch will be relocated, as shown on Drawing D-3, after abandoning the monitoring wells falling within the realignment of the south drainage ditch. These ditches were previously excavated during the interim response action conducted by SNFT in October 1991, in accordance with Section III (6) (c) of the SOW. Excess material from the ditch excavations will be temporarily stockpiled on the northeast corner of the property south of the Site, and later backfilled into the existing south drainage ditch as backfilling of the pipe and media drain commences.

#### **7.4.5 Installation of the Pipe and Media Drain**

Construction of the pipe and media drain, manholes, forcemains, conduits, power and control wiring to the groundwater treatment building and access road for the groundwater extraction systems will be completed to final grade as shown on the "D" construction drawings.

Extraction wells adjacent to the manholes of the pipe and media drain will be installed under a separate contract. The mechanical and electrical components for each extraction well, and discharge forcemain from each extraction well to the nearest manhole of the pipe and media drain, will be installed as shown on Drawings D-3 and D-6.

#### **7.4.6 Construction of Final Soil Cover**

The groundwater extraction system limit of work area will be graded to the final Site cover pregrade elevations and the final soil cover will be constructed within the limit of work area delineated on Drawing D-3, to provide access to the groundwater extraction system and to create a berm which would contain run-off from leaving the Site during implementation of the remaining RA activities.

#### 7.4.7 Construction Closeout

On completion of the construction activities associated with installation of the groundwater treatment system, all construction equipment and support facilities will be removed from the Site.

#### 7.5 SCHEDULE OF ACTIVITIES

The schedule of activities for implementation of the groundwater extraction system phase of the remedial construction activities at the Site is presented on Figure 7.1. Initial startup of extraction of contaminated groundwater from the Water Table Unit (WTU) will commence upon installation of the wet well, and will continue during installation of the pipe media drain and access manholes. Complete commissioning of the pipe and media drain for extraction of contaminated groundwater from the WTU and the groundwater extraction wells for extraction of contaminated groundwater from the Intermediate Unit (IU) will occur approximately five months following the initial startup. All groundwater extracted during installation of the wet well, the pipe and media drain and the access manholes will be treated at the on-Site groundwater treatment facility.

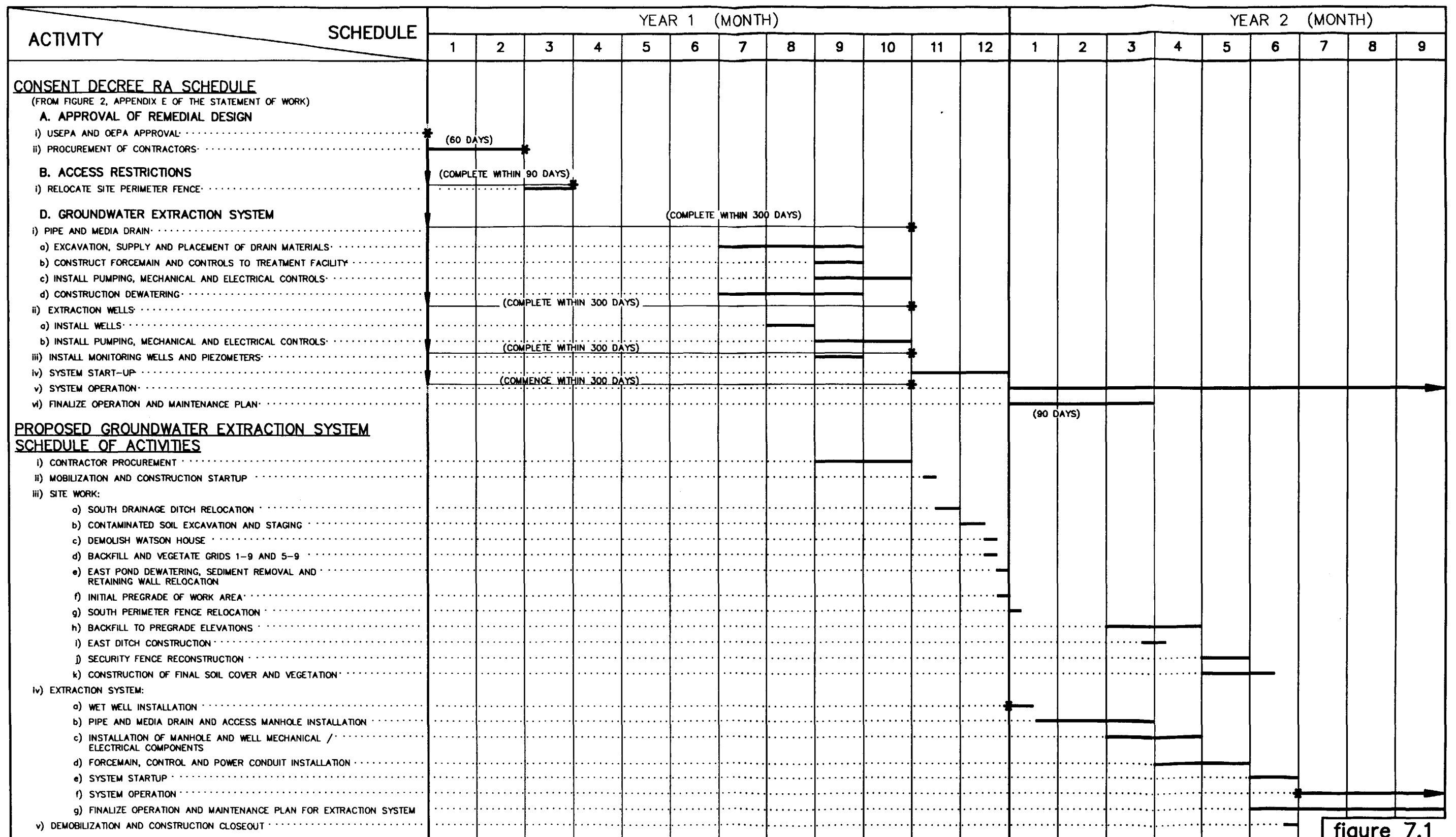


figure 7.1

REMEDIAL CONSTRUCTION SCHEDULE OF ACTIVITIES  
GROUNDWATER EXTRACTION SYSTEM  
SUMMIT NATIONAL SUPERFUND SITE  
Deerfield Township of Portage County, Ohio

## **8.0 SOIL REMOVAL AND TREATMENT**

### **8.1 STATEMENT OF WORK**

The third phase of the RA to be implemented at the Site, as required by the Consent Decree, is removal and on-Site treatment of contaminated soils and sediments, including excavation of buried drums and underground storage tanks, and associated work activities. The initial setup and performance demonstration (demonstration burn) of the on-Site soil treatment facility is to be completed within 15 months of USEPA and OEPA formal approval of the Final Design Report and RC Work Plan. Also, the soil removal and treatment phase of the RA is to be completed within 13 1/2 months of USEPA and OEPA formal approval of the performance demonstration report. Implementation of the soil removal and treatment phase of the RA consists of the following activities:

- i) mobilization of labor, plant, materials, equipment and temporary support facilities to the Site;
- ii) preparation, submittal and approval of Site and Contractor specific plans including:
  - a) Health and Safety Plan,
  - b) Soil Treatment Facilities and Process Information Plan,
  - c) Performance Demonstration Plan and Report,
  - d) Air Modeling Plan,
  - e) Air Modeling Report,
  - f) Soil Treatment Facility Operations and Maintenance Plan,
  - g) Soil Treatment Facility Closure Plan,
  - h) Soil Removal and Treatment Quality Assurance Project Plan,
  - i) Detailed Project Schedule,
  - j) Contractor Organization Chart, and
  - k) Quality Assurance Project Plans.
- iii) setup of the on-Site soil treatment facility and associated works;

- iv) on-Site thermal treatment of stockpiled soils and sediments in the soil staging area, which includes soil from off-Site Grids 1-9 and 5-9, from portions of Grids 4-8, 6-4, 6-6 and 6-7 and sediments removed from on-Site ponds during construction of the groundwater extraction and treatment system;
- v) dewatering of on-Site ponds to facilitate removal of sediments for on-Site thermal treatment;
- vi) excavation and on-Site thermal treatment of the top two feet of sediments from the east and west ponds and soils from Grids 1-2, 2-2, 2-4, 2-5, 2-6, 3-1, 3-5, 4-3, 4-4, 4-5, 4-6, 4-7, 4-8, 5-4, 5-6, 5-7, 6-4, 6-6 and 6-7;
- vii) excavation and on-Site treatment, if applicable, of buried containerized materials, and associated contaminated soils from the six delineated areas of buried drums;
- viii) segregation of visually contaminated soils from the EPA soil stockpile in Grids 5-5 and 5-6, and on-Site treatment of visually contaminated soils;
- ix) removal and reduction of three underground storage tanks in Grid 1-1 and placement under final Site cover, on-Site thermal treatment of visually contaminated soils, and on-Site, if possible, or off-Site treatment of tank contents;
- x) in-place abandonment of the old septic tank in Grid 1-2;
- xi) placement under the final Site cover of drummed soil cuttings and soil samples (in wooden storage shed in Grid 1-1 and old EPA sample storage trailer in Grid 1-2);
- xii) removal of the refractory lining and contents from the old incinerator in Grids 5-6 and 5-7, and on-Site treatment of the removed materials;

- xiii) segregation and on-Site treatment of select samples contained in the wooden storage shed in Grid 1-1 and the old EPA sample storage trailer in Grid 1-2 (thermal treatment of samples of excavated drums and treatment of aqueous waste samples at SNFT's on-Site groundwater treatment facility;
- xiv) demolition of on-Site structures and placement of resulting debris under the on-Site final soil cover, including the old incinerator and buildings, sheds, scrap metal, abandoned dump truck, the old weigh scale building and trailers;
- xv) regrading the work area to Site final cover pregrade elevations;
- xvi) placement of the first six inches of imported clean final Site cover material; and
- xvii) demobilization of labor, plant, materials and equipment from the Site.

The final design for soil removal and treatment is presented in Section 7.0 of the Final Design Report, in the construction specifications for soil removal and treatment included in Appendix G, and on the "E" Drawings.

## 8.2 CONSTRUCTION SPECIFICATIONS AND DRAWINGS

Construction specifications for implementation of the soil removal and treatment phase of the remedial construction at the Site are presented in Appendix G. The construction drawings forming part of the construction specifications are identified by the "E" drawing numbers listed in Section 1.0 and are included under separate binding.

### 8.3 REMEDIAL CONSTRUCTION QUALITY ASSURANCE PROJECT PLAN

The RC QAPP for the soil removal and treatment phase of the RC, as required by the Consent Decree, is provided in Appendix H. Where applicable, the requirements of the RC QAPP have been incorporated into the construction specifications.

### 8.4 IMPLEMENTATION AND SEQUENCING

#### 8.4.1 Project Start-Up

##### 8.4.1.1 Plan Development

Project start-up will consist of the development of work plans listed in Section 8.1.ii), and the preparation of work and support areas by the selected contractor.

The work plans are specific to the selected contractor and the soil treatment facility and operating parameters proposed by the selected contractor, and will be submitted to USEPA and OEPA for approval. The selected contractor's Site-specific Health and Safety Plan and Quality Assurance Project Plan will meet the minimum requirements of the plans included in Appendices B and H, respectively, and will be submitted to USEPA and OEPA for review prior to commencing remedial construction activities. The Soil Treatment Facilities and Process Information Plan (Plan) will provide detailed information on the technical parameters of the soil treatment facility, and the required scope of the Plan as presented in detail in Sections 02090 and 02091 of the soil removal and treatment construction specifications included in Appendix G. This Plan will also be presented in preliminary form by bidders with their bid submission to facilitate the evaluation of selected bidders by SNFT. An Air Modelling Plan and report will also be developed by the selected contractor to determine the impact of the soil treatment activities on ambient air quality. The results of the air

model will assist the contractor in the selection of operating parameters for the soil treatment facility.

The Performance Demonstration Plan and the subsequent reporting following the completion of the performance demonstration will be prepared in conformance with requirements in 40 CFR 270.19, 40 CFR 270.62 and the Hazardous Waste Incineration Guidance Series. As a minimum the Performance Demonstration Plan will include items listed in Section 7.7.4.15 of the Final Design Report. Following completion of the performance demonstration, a preliminary report will be prepared by the selected contractor, and will describe the performance demonstration, operational parameters and emission monitoring results of the performance demonstration. Based on this preliminary report, full-scale operational parameters will be proposed by the selected contractor for review and approval by SNFT, USEPA and OEPA, and interim operation of the soil treatment facility will be permitted contingent upon USEPA and OEPA approval. The contractor will also prepare an Operation and Maintenance Plan and Soil Treatment Facility Closure Plan, which are described in detail in Section 02090 and 02091 of the construction specifications.

All plans described above which are to be prepared by the selected contractor will initially be submitted to SNFT for review and approval, and subsequently modified by the soil treatment contractor, if required. Following modification, the plans will be submitted to USEPA and OEPA for review and approval.

The selected contractor will not be permitted to mobilize to the Site until the contractor's Site-specific HSP has been submitted to USEPA and OEPA, and will not be permitted to excavate contaminated soils, sediments or containerized waste until the HSP has been reviewed by USEPA and OEPA. In addition, the selected contractor will not be permitted to mobilize the soil treatment facility to the Site until the Soil Treatment Facilities and Process Information Plan, Performance Demonstration Plan, Operation and Maintenance Plan and Soil Treatment Closure Plan have been approved by USEPA and OEPA.

#### 8.4.1.2 Work and Support Area Setup

Personnel support areas including Site offices, will be provided by the selected contractor. The equipment decontamination facility will have been installed by the groundwater treatment system remedial contractor. The soil removal and treatment contractor may modify these facilities to meet his specific needs, however the support area will be located and setup as shown on Drawing E-2.

The contaminated soil staging area initially will be prepared by the groundwater extraction system contractor and will be finalized by the soil removal and treatment contractor. Preparation of this area will include consolidation of drums containing EPA investigative waste and PPE into the temporary drum staging area. The soil removal and treatment contractor will maintain drums in the temporary drum staging area pending on-Site disposal.

A drum staging area will be prepared to stage drums and containers excavated from the areas of buried drums. The drum staging area will be constructed as shown on Drawing E-4, however the soil treatment contractor will be permitted to modify the capacity of the area in accordance with his proposed procedures, upon approval of SNFT.

Site preparation activities will also include delineation of work areas and routes of transportation. Work areas, including contaminated grids and areas of buried drums, will be delineated by temporary fencing (snow fence), barricades or safety ribbon as specified in the HSP included in Appendix B and in Section 01121 of the soil removal and treatment construction specifications included in Appendix G.

#### 8.4.1.3 Soil Treatment Facility Installation

Following approval of the Performance Demonstration Plan and other soil treatment specific plans, the selected contractor will be

permitted to mobilize the soil treatment facility to Grids 3-3 and 3-4. This area may be extended to Grids 3-2 and 4-2, if necessary. Grading of the area prior to installation of the facility will be limited to minor grading and the balancing of cut/fill quantities.

The soil treatment facility will include a waste consolidation area, soil treatment unit, ash staging area and temporary water storage and treatment plant. These areas are described in detail in Section 7 of the Final Design Report.

#### 8.4.2 Soil Treatment Unit Shakedown and Performance Demonstration

Following mobilization and set up of the soil treatment facility to the Site, the selected contractor will perform a 'shakedown' of the treatment unit to verify that it is in a state of operational readiness for the performance demonstration and operation. The shakedown will include testing and trial runs of fans, pumps, conveying systems, air pollution control systems and the heating system. The unit will be heated to the expected operating temperature and initially clean soil will be processed to verify that the unit is capable of physically accepting waste. With USEPA and OEPA approval, and as allowed under 40 CFR 264.344.(c)(1), the contractor may feed soil scheduled for treatment to verify that the unit is capable of physically accepting waste and is capable of treating it to specified standards.

Following shakedown of the soil treatment equipment, a performance demonstration of the soil treatment equipment will be performed consistent with the requirements of the final design as detailed in Sections 7.7 and 7.8 of the Final Design Report, and in the Performance Demonstration Plan to be submitted by the selected contractor.

#### 8.4.3 Soil And Sediment Removal

Soil excavation activities will commence at Grid 3-1 and proceed in sequence to Grids 1-2 and 2-2. The area in the vicinity of Grid 5-2 initially will be used as a treated soil and sediment filling area, since substantial quantities of fill are required in this area to attain the final Site cover pregrade elevations. Therefore, this grid will also be excavated early in the excavation program.

Excavation and treatment of west pond sediments will then be performed as adjacent soils are excavated. The pond will be dewatered and all waters will be treated, as appropriate, at SNFT's on-Site groundwater treatment facility or the contractor's wastewater treatment plant. The sediments from the entire pond then will be excavated to a depth of two feet. To take advantage of periods of dry weather, it is expected that the sediments from the west pond will be excavated in as short a period as possible and stockpiled in the contaminated soil staging area, pending treatment. Following removal of sediments from the west pond, backfilling of the pond with treated soil and sediment will commence and continue to the final Site cover pregrade elevations, followed by placement of six inches of clean imported fill comprising the first lift of the final soil cover.

Excavation then will proceed, in sequence, from Grids 4-3, 4-4, 6-4, 5-4, 4-8, 5-7, 5-6, 4-7, 4-6 to 4-5. The east pond then will be dewatered and two feet of sediment excavated, followed by Grids 2-6, 2-4, 2-5 and lastly 3-5. The actual sequence may be altered during the course of remediation, dependent on weather conditions and other considerations that might arise. However, the intent of diminishing the exclusion zone towards the soil treatment facility will be maintained. As the excavation in each area is completed from west to east, the excavated areas and adjacent clean grid squares will be backfilled with treated soil and sediment, sediment/rubble from the existing stockpiles, excess soil from the south ditch relocation, east ditch construction and pipe and media drain installation, and/or regraded to the final Site cover pregrade elevations, followed by placement of six inches of clean imported fill comprising the first lift of the final Site cover.

Contaminated soil excavated during the installation of the groundwater extraction system will have been staged at the contaminated soil staging area. These materials include the top two feet of soils from Grids 1-9, 5-9, parts of Grids 6-4, 6-6, 6-7 and 4-8, and sediments from the top two feet of the east end of the east pond. On-Site treatment of these materials will be initiated prior to commencement of excavation of on-Site soils and will proceed progressively as the remaining soils and sediments are excavated.

Excavated soils and sediments will be stockpiled in the soil staging area following excavation or will be taken directly to the waste consolidation area for preparation and consolidation with containerized waste, if necessary, and fed into the soil treatment unit.

Stockpiled material in the soil staging area will remain uncovered unless volatile organic compound (VOC) and dust monitoring indicate that on-Site or perimeter action levels are exceeded. Should air monitoring action levels be exceeded the stockpiles responsible for the exceedences will be covered, wetted down or removed immediately to the waste consolidation area.

A stockpile of contaminated materials will be maintained at the contaminated soil staging area to ensure soil treatment can proceed during inclement weather conditions and when the excavation areas of the Site are inaccessible due to freezing or saturated conditions.

Other on-Site soils/materials which do not require on-Site treatment, but will be encountered during the RA, consist of materials from demolition activities, investigative wastes currently at the Site (including drummed soil auger cuttings and soil samples in jars), soils moved during Site pre-grading activities, perimeter Site drainage ditch and impoundment sediments currently stockpiled on Site, and visually clean soils from the on-Site EPA soil stockpile. These materials will be used as fill under the final Site cover. Drums containing soil auger cuttings will be emptied and crushed and the soil and crushed drums placed under the final Site cover. Jars containing soil samples need not be emptied prior to placement as fill.

Staged drums and sample jars containing aqueous waste from the Remedial Investigation conducted at the Site by USEPA will be emptied and the wastewater treated at SNFT's on-Site groundwater treatment facility. Drums and containers will be crushed and placed under the final Site cover.

#### 8.4.4 Demolition Activities

Demolition of existing structures will be performed prior to or concurrent with soil grading activities. Existing structures on Site will be demolished and reduced to manageable size pieces, as appropriate for use as backfill material under the Site final cover. Some existing structures, including the coal tipple structure, will have been demolished and the rubble stockpiled in Grids 4-2, 5-2, 5-3 and 6-3 by the contractor installing the groundwater treatment system. The remaining structures identified on Drawing E-2 (including the existing incinerator, sheds, EPA trailer, power poles, etc.) will be demolished by the soil removal and treatment contractor. All structures will be demolished taking due consideration of health and safety concerns. Buried tanks, which potentially contain VOCs, will be reduced by cold cutting to minimize the risk of explosion. Entry into the existing incinerator or buried tanks, if necessary, will be performed under confined space entry procedures as described in the HSP.

Following demolition and reduction of rubble, the resulting debris will be placed and spread such that it is at least six inches below the final Site cover pregrade elevations shown on Drawing E-5 and such that the risk of voids being present under or between the rubble following placement of soil is minimal.

#### 8.4.5 Buried Drum Removal And Treatment

##### 8.4.5.1 Extent of Drum Excavation

Excavation of buried drums and containers from the areas identified on Drawing E-1 will be initiated concurrent with the excavation of soils requiring on-Site treatment.

The area of buried drums shown on Drawing E-1 will be excavated to a depth of 8 feet or 3 feet below the lowest container, whichever is greater. Based on the pre-design investigation presented in TM-3, most containerized material is expected to be at a depth of two to three feet below existing grade, although containers as deep as seven feet were found at one location.

The Consent Decree states that visually contaminated soils immediately adjacent to leaking buried drums/containers will be removed to the maximum depth of the groundwater table, estimated at a maximum depth of eight feet below ground surface. However, it is anticipated that the remedial groundwater extraction program, which will be implemented prior to the commencement of buried drum excavation activities, will lower the groundwater table. Therefore, during the RA, removal of visually contaminated soil immediately adjacent to leaking buried drums, if any, will be limited to a depth of eight feet below existing grade, the average depth to groundwater established during the pre-design investigation of magnetic anomalies as reported in TM-3. These visually contaminated soils, from surface grade to a maximum depth of eight feet below existing surface grade, will be treated on Site. Those soils from above the water table which are not visually contaminated and all soils which are below the maximum depth of eight feet and which are removed to facilitate removal of the drums, will be replaced into their respective excavation as backfill.

Excavation activities will be carefully controlled to minimize the risk of damaging buried drums and containers. Control of the selected contractor will be maintained by SNFT throughout RC activities.

Excavation will be completed with mechanical equipment such that contact by handling personnel is minimized. Soil will be excavated in 1-foot depth increments. Containers will be removed from the excavation by means of a drum grapppler, a backhoe bucket or front-end loader bucket. Where removal of a container in a manner to prevent damage cannot be achieved by the above methods, slings may be placed around the container. In all cases, containers will be removed from the excavations in a manner which minimizes the potential for damage and loss of contents.

Where an area of buried drums overlaps with an area of contaminated soil designated for treatment, removal of the surficial two feet of soil will be conducted under drum excavation protocol. In addition, a 20-foot exclusion zone will be maintained around all areas of buried drums in which soil will not be excavated until the drum excavation is complete.

#### 8.4.5.2 Removal From Excavation

As containerized materials are encountered and prior to moving the container a preliminary check of the container will be made by screening with an explosimeter and a photoionization detector. A visual description also will be made of each container, which will include identification of the container size, type (e.g. steel, plastic, aluminum, etc.), lid (e.g. open head, closed head), condition (e.g. leaking, corroded, etc.) and labels.

If a container is found to be leaking, liquids will be pumped out if possible, into a repack drum, prior to moving the container. Any leaking containers will be carefully removed from the excavation and placed in 85-gallon overpack drums. Containers not found to be leaking will be removed from the excavation and carefully examined for integrity. Containers judged to be severely deteriorated will be overpacked. Leaking or spilled liquids will be removed and placed in overpack drums and cross referenced to the leaking container on the drum log. A spill report will be prepared by the contractor for all spills at any location, in accordance with Section 01500 in Appendix G. Small containers (less than 10 gallons) will be

placed in 85-gallon overpack drums with other small containers of similar contents.

Containers found to be bulging or otherwise apparently under pressure will be placed in overpacks.

All containers removed from the excavation will be logged and unique identification numbers will be affixed to each container, repack or overpack. Containers will be logged on a container data sheet as shown on Figure 8.1.

Any customized or unusual looking containers (compressed gas, aluminum drums, etc.) will be handled with extreme care, and the Site Safety Officer (SSO) will be notified to identify suitable precautionary handling procedures. Containers of this type will be segregated from other containers in the drum staging area and will be specially labeled. Containers of this type were not identified during the pre-design investigation and are not anticipated at this Site.

Any empty containers found with little or no adhered characteristic (40 CFR 261) hazardous waste (less than one inch of residue in the bottom of the container, less than three percent by weight, or as otherwise defined in 40 CFR 261.7) will be crushed and buried under the final Site cover.

#### 8.4.5.3 Container Staging

All containers will be transported to the drum staging area, shown on Drawing E-2, in their original container or in 55- to 85-gallon repacks/overpacks. Surface water runoff from within the drum staging area will be directed to a catchbasin, by grading the surface of the native soil and the placed sand and gravel base. Runoff collected in the catchbasin will periodically be transferred to the on-Site groundwater treatment facility for treatment prior to discharge. Any water which infiltrates into the native soil will be collected by the groundwater extraction system and treated at SNFT's on-Site groundwater treatment facility.

**CONTAINER DATA SHEET  
SUMMIT NATIONAL SUPERFUND SITE  
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO**

**A. CONTAINER IDENTIFICATION**

Unique Container ID. No.: \_\_\_\_\_

Finger Print Grouping: \_\_\_\_\_

Labels: \_\_\_\_\_

Description: \_\_\_\_\_

**B. EXPOSURE AND REMOVAL (Circle Choices)**

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Ambient Temperature: \_\_\_\_\_

Location: \_\_\_\_\_

Container Size:      5      15      30      55      85 gallon      Other: \_\_\_\_\_

Type:      *Steel*      *Plastic*      Other: \_\_\_\_\_

Lid:      *Open Head*      *Closed Head*

Condition:      *Good*      *Bad*      *Bulging*      *Perforated*      *Leaking*

Description: \_\_\_\_\_

PID: \_\_\_\_\_ Explosimeter: \_\_\_\_\_

Contents (If Visible):      *Solid*      *Liquid*      *Clear*      *Opaque*

Description: \_\_\_\_\_

Overpacked?      YES      NO

Field Observer: \_\_\_\_\_

**C. SAMPLING AND COMPATIBILITY (Circle Choices)**

Ambient Temperature: \_\_\_\_\_

Sample Number: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Method of Opening:      *Already Open*      *Remote*      Other: \_\_\_\_\_

PID: Before: \_\_\_\_\_ After: \_\_\_\_\_ EXPLOSIMETER: Before: \_\_\_\_\_ After: \_\_\_\_\_

Condition:      *Good*      *Bad*      *Bulging*      *Perforated*      *Leaking*

Contents:      *Solid*      *Liquid*      *Solid/Liquid*      *Clear*      *Opaque*

Description: \_\_\_\_\_

Liquid/Solid Ratio: \_\_\_\_\_

Percent (%) Full:      25%      50%      75%      100%      Other: \_\_\_\_\_%

If Liquid:      *Pumpable*      *Not Pumpable*

If Solid:      *Easily Emptied*      *Not Easily Emptied*

Comments: \_\_\_\_\_

Sampler: \_\_\_\_\_

Containers will initially be staged close to the entrance of the drum staging area. Following sampling, fingerprinting and compatibility testing, containers will be staged in rows along with other wastes with which they are compatible. Containers will be placed in double rows, as shown on Drawing E-4, allowing six feet separation between the double rows for access.

The staging area has a maximum capacity of 250 85-gallon containers. The low capacity of the staging area allows for the progressive movement of containers through the staging area to the waste consolidation area. If necessary, the size of the drum staging area can easily be expanded by construction of additional berms and granular base.

#### 8.4.5.4 Container Entry and Sampling

Containers will be sampled only by personnel specifically trained in this task. A team of two sampling personnel plus one supervisor stationed at the perimeter of the drum staging area will be used. The SSO will monitor the sampling procedures.

Containers will only be opened and sampled in the drum staging area. Containers will be grounded before opening. If the bung/cap can easily be removed, the container will be opened using non-sparking brass wrenches. Where bungs/caps cannot be removed, the container will be opened remotely by piercing the lid with a brass pneumatic ram fitted to the end of a backhoe.

Containers found to be bulging or otherwise apparently under pressure will only be entered by special protocol, under the direct supervision of the SSO, which will include remote opening procedures at a screened location within the drum staging area.

All containers containing liquids will be sampled for fingerprint and compatibility purposes. Liquid contents will be sampled by means of a glass thief inserted to the full depth of the drum, or as deep as

possible. Each phase will be included in a composite sample of the container contents. Upon completion of sampling, the glass thief will be broken and placed into the container.

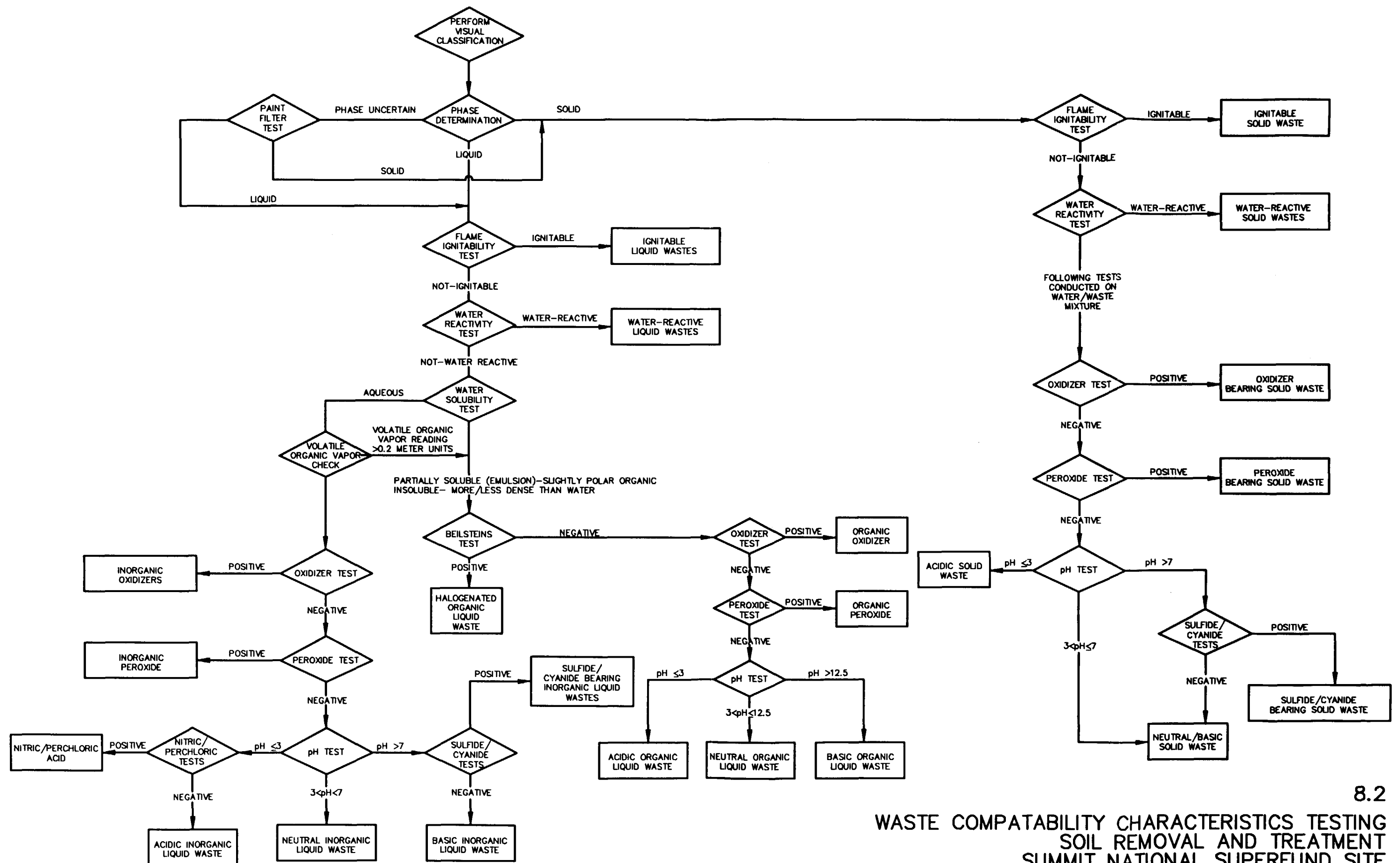
Liquid samples will be placed in 500 milliliter (mL) amber glass jars with teflon lids. The jars will be uniquely numbered and all relevant data such as container number, liquid/solid ratio, percent full and relative pumpability will be recorded on a container data sheet as shown on Figure 8.1.

All containers containing solids which are not visually classified as non-hazardous will be sampled for compatibility and fingerprint purposes with a stainless-steel trowel. Samples will be taken from a depth of at least 12 inches, if possible, and will represent the cross-sectional area of the container. Soil samples will be placed in jars and relevant data recorded as described for liquids above.

Based on the compatibility and fingerprint testing, those containers found to contain dangerous waste (i.e. potentially explosive) will be segregated from other containers.

Fingerprint and compatibility testing will be done in accordance with Figure 8.2 and "A Method For Determining the Compatibility of Hazardous Waste", EPA-600/2-80-076, April 1980. Following testing, samples determined to be of the same waste class will be characterized to the degree necessary to determine the appropriate disposition.

Materials which are readily identifiable as non-hazardous waste (i.e. rubber, metallic scrap, etc.) will be decontaminated, consolidated and disposed of off Site at a sanitary landfill. Other materials will be sampled and analyzed for fingerprint and compatibility. Composite samples of consolidated materials will be analyzed to determine their appropriate disposition. Based on the analyses of the composite samples, hazardous organic liquids and solids will be treated at the on-Site soil treatment facility, if applicable, or alternatively at an off-Site incinerator. Hazardous inorganic solids will be disposed of off Site at Resource Conservation and Recovery Act



8.2

WASTE COMPATABILITY CHARACTERISTICS TESTING  
 SOIL REMOVAL AND TREATMENT  
 SUMMIT NATIONAL SUPERFUND SITE  
 Deerfield Township of Portage County, Ohio

CRA

(RCRA) 40 CFR Part 264/265 Treatment/Storage/Disposal (TSD) Facilities approved by USEPA and OEPA. Aqueous wastes containing organic and/or inorganic constituents which are amenable to on-Site treatment will be treated at the on-Site groundwater treatment facility. Aqueous wastes which are not amenable to on-Site treatment will be treated/disposed of at an approved off-Site permitted facility. Non-hazardous waste fuels will be disposed of at a permitted oil recycling facility.

#### 8.4.6 Underground Tank Removal and Treatment/Disposal

Three buried tanks located in the northwest corner of the Site during the pre-design investigations, as reported in TM-3 and shown on Drawing E-2, will be sampled, analyzed, characterized and disposed of in a similar fashion to buried drums. The fourth buried tank located in Grid 1-2 is an old septic tank. The concrete floor and roof of this tank will be fractured, filled with Site soils and left in place.

The horizontal and vertical extent of soil removal and treatment, if any, adjacent to the three buried tanks in Grid 1-1 will be based on visual examination of the soils. Those soils that are visually contaminated and are above the water table will be removed, immediately placed in haulage units and taken to the soil staging area. Those soils from above the water table which are not visually contaminated and all soils which are below the water table and which are removed to facilitate removal of the tanks, will be stockpiled adjacent to the excavation and replaced into their respective excavation when the excavation is complete.

#### 8.4.7 Waste Consolidation

All soil, sediments and containerized wastes to be treated on Site will be taken to the waste consolidation area shown on Drawing E-2, and mixed and homogenized with other waste streams and fed into the soil treatment unit. The waste consolidation area will include the soil treatment feed system such that handling and movement of mixed waste is minimized.

Soils, sediments and wastes will be weighed separately upon entering the waste consolidation area. It may be necessary to dewater sediments with a filter press, dryer, or similar dewatering device prior to mixing with other waste streams, to facilitate treatment and conserve fuel costs. Containerized solid waste including the container will be placed into a shredder and reduced to maximum dimension of two inches prior to being treated in the soil treatment unit. Containerized liquid wastes will be pumped from their containers into mixing tanks. Soils will also be crushed, if necessary, to reduce them to maximum dimension of two inches prior to treatment.

Waste streams will only be mixed with other compatible waste streams.

Soils and sediments will be mixed with shredded containerized waste prior to being fed to the soil treatment unit. The contractor may mix liquid waste or liquid fuel with the soil/sediment/solid waste mixture prior to feeding, or may elect to inject the liquids directly into the primary or secondary chamber of the treatment unit. The mixing and feeding mechanism are dependent upon the treatment unit to be used by the contractor and will be detailed in the Performance Demonstration Plan, Soil Treatment Facilities and Process Information Plan, and Waste Consolidation Plan.

#### 8.4.8 Soil, Sediment and Containerized Waste Treatment

Treatment of soils, sediments and containerized wastes will be performed with a rotary kiln incinerator, infrared incinerator or high temperature thermal desorption unit in accordance with the performance parameters provided in the Final Design Report and the performance and operational parameters established by the selected contractor and approved by USEPA and OEPA based on the performance demonstration. Drummed hazardous organic waste may be incinerated on Site if it meets the feed parameters determined during the performance demonstration, or will be incinerated off Site. Drummed hazardous organic waste of low ash content may be incinerated at an off-Site RCRA or TSCA incinerator should a high

temperature thermal desorption unit be used for on-Site treatment (to be determined in consultation with selected contractor in consideration of costing). As well, PCB contaminated soil from Grids 3-4, 4-5 and 4-6 will be landfilled off Site should the performance criterion for PCB in the stack emissions not be achieved. Treatment of on-Site materials is summarized in Section 7.2 of the Final Design Report.

#### 8.4.9 Handling of Treated Soil, Sediment and Fly ash

Upon exit from the treatment unit, the treated soil and sediment will be sampled and stockpiled. Fly ash, if generated separately, will also be sampled and staged in roll-off boxes. The frequency of sampling and testing of the ash material will be determined based on the results obtained during the performance demonstration. The treated soil and sediment and the fly ash will be staged pending receipt of analytical results. Should organic criteria be exceeded, the material will be reintroduced into the treatment unit. Should TCLP metals criteria be exceeded, the material will be placed in an on-Site RCRA cell as specified in the SOW.

#### 8.4.10 Backfilling and Pregrading

Ash evaluation and disposal criteria are discussed in Section 7 of the Final Design Report, and compliance with these requirements will govern whether the treated soil and sediment and the fly ash can be placed as backfill or whether placement in a Resource Conservation and Recovery Act (RCRA) cell is required.

Non-hazardous treated soil, sediment and fly ash, and untreated soils from Site regrading, sediment, rubble and excess soils from the pipe and media drain and south ditch relocation, will be used as fill below the final Site cover pregrade elevations shown on Drawing E-5. Following pre-grading, the first six inches of the final Site cover will be placed.

Backfilling and regrading to pregrade elevations will occur concurrently with the excavation and treatment operations. Contaminated grids, once excavated to the specified depth of two feet below existing grade, will be backfilled immediately with at least six inches of treated or uncontaminated material to limit potential VOC emissions to below action levels specified in the HSP and the Air Monitoring Plan, if required.

Backfilling and compaction will be performed in a manner consistent with standard industry practice. The stockpiled treated soil and sediment will be loaded on dump trucks using front-end loaders and placed by end-dumping, followed by blading with a bulldozer and compaction. In areas near the thermal treatment unit the backfill may be bladed with a bulldozer directly from the stockpiles to the backfill area. Fly ash, if separate from the treated materials, will be end-dumped from the roll-off boxes. Dust will be controlled during these operations to limit particulates to concentrations below those specified in the Health and Safety Plan. This may include moisturizing the fly ash prior to placement, or wetting materials after they are placed. Compacted lifts will not exceed 12 inches in thickness, except for in the pond areas where an initial lift of 18 to 24 inches in thickness may be required to account for underlying unstable soils. All soils, sediments and ash will be compacted to at least 90 percent of maximum dry density as determined by American Society for Testing Materials (ASTM) Method D1557.

Backfill in relatively flat and stable areas will be compacted with a 10-ton (minimum) rolling type compactor. In the drum excavation area, it may be necessary to place backfill in smaller lifts and consequently use lighter equipment due to the restricted work space and access. Also, initial compaction to reduced density requirements may be necessary in the pond areas. Although minimal settlement may result in the long-term due to compression of under-compacted backfill, adjustments following placement of the final Site cover can easily be made by placement of additional fill.

#### 8.4.11 Construction Closeout

Following demobilization of the soil treatment facility, mobile decontamination facilities will be removed, the decontamination and waste consolidation area pads will be fractured, and the service areas will be graded to the final Site cover pregrade elevations and left in place, followed by placement of six inches of clean imported fill comprising the first lift of the final Site cover. The clean imported fill will be compacted to a minimum density of 90 percent of the maximum dry density determined in accordance with ASTM Method D1557.

#### 8.5 SCHEDULE OF ACTIVITIES

The schedule of activities for implementation of the soil removal and treatment phase of the remedial construction activities at the Site is presented on Figure 8.3.



## **9.0 SITE COVER**

### **9.1 STATEMENT OF WORK**

The fourth phase of the RA to be implemented at the Site, as required by the Consent Decree, is the construction of the final Site cover and associated activities. The final Site cover is to be completed within 8 1/2 months of the final completion of the soil removal and treatment activities detailed in Section 8.0. Installation of the final Site cover phase of the RA consists of the following activities:

- i) mobilization of labor, plant, materials, equipment and temporary office and support facilities to the Site;
- ii) development and implementation of a Site-specific Health and Safety Plan to address safety requirements for installation of the remaining final soil cover at the Site by the selected remedial contractor;
- iii) importation and placement of one foot of clean final Site cover material over the existing six-inch loam soil layer within the work area;
- iv) importation and placement of six inches of clean topsoil within the work area;
- v) fertilizing, seeding, watering and establishing the vegetation within the work area; and
- vi) demobilization of labor, plant, materials and equipment from the Site.

The final design for final Site cover is presented in Section 8.0 of the Final Design Report, in the construction specifications for Site cover included in Appendix I, and on the "F" drawings.

### **9.2 CONSTRUCTION SPECIFICATIONS AND DRAWINGS**

Construction specifications for implementation of the final soil cover phase of the remedial construction at the Site are presented in Appendix I. The construction drawings forming part of the construction

specifications are identified by the "F" drawing numbers listed in Section 1.0 and are included under separate binding.

### 9.3 REMEDIAL CONSTRUCTION QUALITY ASSURANCE PROJECT PLAN

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The RC QAPP for installation of the final soil cover phase of the remedial construction, as required by the Consent Decree, is provided in Appendix J. Where applicable, the requirements of the RC QAPP have been incorporated into the construction specifications.

### 9.4 IMPLEMENTATION AND SEQUENCING

Construction of the final Site cover in areas of the groundwater treatment and extraction systems will be completed coincident with completion of the respective phases of the RA. Construction of the final Site cover over the remaining areas of the Site will proceed under uncontaminated conditions, since the Site will have been regraded to pregrade elevations and six inches of clean fill will have been placed during the soil removal and treatment phase of the remedial construction. The sequence of final Site cover placement will proceed with due consideration for erosion control. It is expected that placement will proceed from west to east, from points of highest elevation to lowest elevation.

### 9.5 CONSTRUCTION CLOSEOUT

On completion of the placement of the final Site cover and vegetation of the Site, all Site offices, construction facilities, plant and equipment will be removed from the Site and the Site will be left in a clean and tidy condition.

Long-term operation, maintenance and monitoring of the Site then will commence as detailed in the operation, maintenance and monitoring plan included in Appendix L.

## 9.6 SCHEDULE OF ACTIVITIES

The schedule of activities for implementation of the Site cover phase of the remedial construction activities at the Site is presented on Figure 9.1.

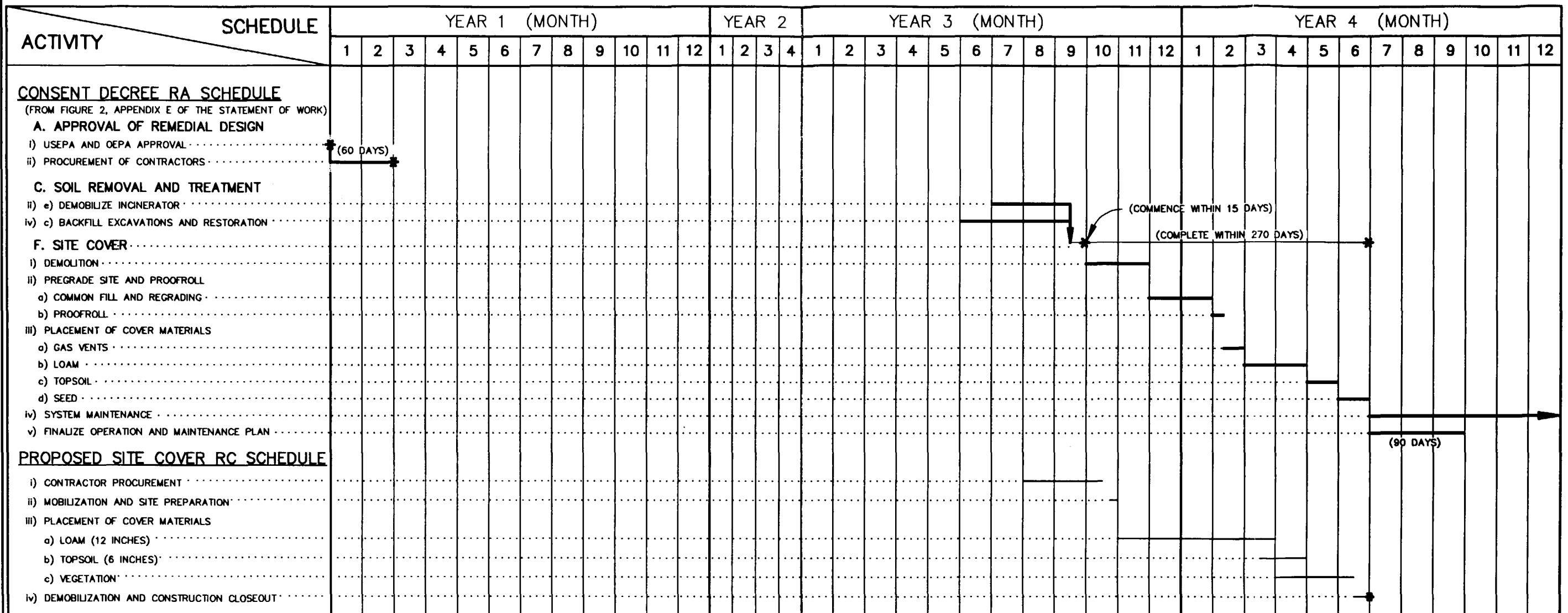


figure 9.1  
 REMEDIAL CONSTRUCTION SCHEDULE OF ACTIVITIES  
 SITE COVER  
 SUMMIT NATIONAL SUPERFUND SITE  
 Deerfield Township of Portage County, Ohio

## **10.0 PIEZOMETERS, MONITORING WELLS AND EXTRACTION WELLS**

### **10.1 STATEMENT OF WORK**

As required by the Consent Decree, monitoring of the groundwater at and adjacent to the Site will be conducted during operation of the groundwater extraction system. The groundwater will be monitored from three existing monitoring wells, one existing piezometer, 39 new monitoring wells, 19 new piezometers, six new extraction wells, one new potable water supply well and three off-Site residential wells. The remaining existing monitoring wells and piezometers will be abandoned as they are not suitably located to effectively be used during the groundwater monitoring program.

Installation and abandonment of wells and piezometers consists of the following activities:

- i) mobilization of labor, plant, materials and equipment to the Site;
- ii) development and implementation of a Site-specific Health and Safety Plan by the selected drilling contractor for abandonment/installation of piezometers, monitoring wells and extraction wells;
- iii) installation of the potable water supply well in Grid 1-7, and closing and abandoning the Tipple Well in Grid 2-3, piezometer P1-6 in Grid 1-6 and monitoring well MX-1 in Grid 1-8, prior to commencement of the groundwater treatment system phase of the RA;
- iv) installation of new monitoring wells and piezometers both on and off Site;
- v) abandonment of existing monitoring wells and piezometers both on and off Site;
- vi) installation of extraction wells adjacent to the pipe and media drain;

- vii) adjustment of the surface casings of the four existing wells to remain, to compensate for the change in final ground elevations; and
- viii) demobilization of labor, plant, materials and equipment from the Site.

The final design for well installation and abandonment is presented in Section 9.0 of the Final Design Report, in the construction specifications for well installation and abandonment included in Appendix K, and on the "G" drawings.

## 10.2 CONSTRUCTION SPECIFICATIONS AND DRAWINGS

Construction specifications for installation of new piezometers, monitoring wells and extraction wells, and for abandonment of existing monitoring wells and piezometers, are presented in Appendix K. The construction drawings forming part of these construction specifications are identified by the "G" drawing numbers listed in Section 1.0 and are included under separate binding.

## 10.3 REMEDIAL CONSTRUCTION QUALITY ASSURANCE PLAN

Remedial construction quality assurance for installation/abandonment of wells will be in accordance with the RC QAPP for installation of the groundwater extraction system phase of the remedial construction as presented in Appendix F. Quality assurance for sampling and analytical activities will be in accordance with the QAPP presented in the draft Operation, Maintenance and Monitoring Plan included in Appendix L.

## 10.4 IMPLEMENTATION AND SEQUENCING

### 10.4.1 Site Preparation

Site offices and support facilities will be placed in Grid 1-3. Equipment decontamination prior to construction of the equipment decontamination facility in Grid 2-3 by the groundwater treatment system remedial contractor, will be conducted on the existing temporary equipment decontamination pad in Grid 1-5.

### 10.4.2 Potable Water Supply Well Installation

Prior to commencement of on-Site remedial construction activities, the potable water supply well will be installed in Grid 1-7 as shown on Drawing G-2. Installation details for the potable water supply well are provided on Drawing G-5 and in the construction specifications included in Appendix K.

### 10.4.3 Well Abandonment Prior to Phase I Remedial Construction

The Tipple Well in Grid 2-3 will be closed and abandoned prior to demolition of the coal tipple structures by the groundwater treatment system remedial contractor. Monitoring well MX-1 in Grid 1-8 and piezometer P1-6 in Grid 1-6 also will be abandoned prior to remedial construction work activities commencing in these areas.

### 10.4.4 Well Abandonment Prior to Relocation of South Drainage Ditch

The existing monitoring wells within the new alignment of the south drainage ditch will be closed and abandoned prior to commencing relocation of the south drainage ditch.

#### 10.4.5 Monitoring Well and Piezometer Installation and Abandonment

The remaining existing monitoring wells and piezometers to be abandoned will be abandoned in a sequence to minimize interference with other remedial construction activities at the Site.

Similarly, the new monitoring wells and piezometers will be installed in a sequence to minimize interference with other remedial construction activities at the Site. Wells to be abandoned and installed are presented on Drawings G-2 and G-4. Well installation details are presented on Drawing G-5, and details for extension of existing well casings are presented on Drawing G-6.

#### 10.4.6 Extraction Well Installation

The six extraction wells will be installed adjacent to the pipe and media drain, on completion of the pipe and media drain installation by the groundwater extraction system remedial contractor, and prior to construction of the final Site cover.

#### 10.4.7 Construction Closeout

On completion of the construction activities associated with installation/abandonment of wells, all drilling equipment and support facilities will be removed from the Site.

### 10.5 SCHEDULE OF ACTIVITIES

The schedule of activities for implementation of the well installations/abandonments at the Site is presented on Figure 15.1.

## **11.0 LONG-TERM OPERATION, MAINTENANCE AND MONITORING PLAN**

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As required by the SOW, a draft long-term Operation, Maintenance and Monitoring Plan (O & M Plan) for the Site has been developed and is included in Appendix L. Relevant sections of the O & M Plan will be finalized as each phase of the remedial construction at the Site is completed.

The draft O & M Plan included in Appendix L consists of the following sections:

- i) Introduction;
- ii) Description;
- iii) Reference Drawings;
- iv) Organizational Structure;
- v) Operation;
- vi) Equipment;
- vii) Maintenance;
- viii) Monitoring;
- ix) Termination of Extraction and Treatment Systems;
- x) Site Health and Safety Plan;
- xi) Reference Reports and Manuals; and
- xii) Quality Assurance Project Plan.

The QAPP has not been included in the draft O & M Plan as agreed with USEPA and OEPA. The QAPP will be submitted to USEPA for review and approval prior to commencing sampling and analytical activities related to operation and monitoring of the groundwater extraction, treatment and monitoring systems.

## **12.0 PROJECT DOCUMENTATION AND REPORTING**

### **12.1 QUARTERLY PROGRESS REPORTS**

Quarterly progress reports will be provided to USEPA and OEPA as required by the Consent Decree and will include the following major items:

- i) description of the actions, including any corrective actions directed towards problem areas, which have been taken toward achieving compliance with the Consent Decree and RC Work Plan during the previous quarter;
- ii) results of sampling and tests and all other data received by SNFT during the course of the remedial activities during the previous quarter;
- iii) all plans and procedures completed according to the RC Work Plan during the previous quarter;
- iv) descriptions of all actions, remedial construction activities, data collection and plans which are scheduled for completion during the next quarter;
- v) information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the RC Work Plan, a description of efforts made to mitigate those delays or anticipated delays and any other plans required to be submitted pursuant to the Consent Decree; and
- vi) identification of each failure during the previous quarter to attain any deadline or milestone identified in Paragraph XVIII.A of the Consent Decree.

The progress reports will be submitted by the tenth day of the first month of each calendar quarter, commencing with the first calendar

quarter following the formal approval date of the Final Design Report and RC Work Plan, until the completion of all construction required under the RC Work Plan.

If the date for submission of any item or notification required by the Consent Decree falls upon a weekend or State or Federal holiday, the submission date will be extended until the next business day following the weekend or holiday.

## 12.2 EVENT OCCURRENCE REPORTING

Upon the occurrence of any event during performance of the RC Work Plan which, pursuant to § 103 of CERCLA, requires reporting to the National Response Center, SNFT will promptly orally notify the USEPA Project Manager (RPM) and OEPA Project Coordinator, or in the event of the unavailability of the USEPA RPM, the Emergency Response Section, Region V, USEPA and OEPA Office of Emergency Response, in addition to the reporting required by § 103.

Within 20 calendar days of the onset of such an event, SNFT will furnish to USEPA and OEPA a written report setting forth the events which occurred and the measures taken, and to be taken, in response thereto.

Within 30 calendar days of the conclusion of such an event, SNFT will submit a report setting forth all actions taken to respond thereto.

## 12.3 FINAL OPERATION, MAINTENANCE AND MONITORING PLAN

As required by the SOW, the final Operation, Maintenance and Monitoring Plan will be submitted to USEPA and OEPA

within 120 days of completion and startup of the groundwater extraction and treatment systems.

#### 12.4 NOTICE OF COMPLETION OF REMEDIAL ACTION AND FINAL REPORT

On completion of the four phases of remedial construction activities and well installation/abandonment as specified herein, a "Notice of Completion of Remedial Action" and a Final Report will be submitted to USEPA and OEPA as required by Section XXVI, Paragraph B of the Consent Decree. The Final Report will summarize the remedial construction work performed, any modification to the RC Work Plan approved by USEPA and OEPA, the performance standards and engineering performance specifications and standards achieved during implementation of the remedial construction activities, and all supporting documentation, either by inclusion in the Final Report or by reference in the Final Report.

#### 12.5 REMEDIAL CONSTRUCTION PROGRESS REPORTS

Documentation and reporting of progress during implementation of remedial construction activities is detailed in the RC QAPP's included in Appendices D, F, H and J for each phase of the remedial construction.

### **13.0 PROJECT CLOSEOUT**

On completion of the final phase of the remedial construction as detailed in Section 9.0, all construction equipment, facilities and temporary controls will be removed from the Site, and the Site will be left in a clean and orderly fashion. Long-term operation and maintenance of the Site until termination of groundwater extraction and treatment then will commence according to the requirements of the draft O&M Plan referenced in Section 11.0. A Notice of Completion of Remedial Action and a Final Report, as presented in Section 12.4, will be prepared and submitted to USEPA and OEPA for approval.

On termination of groundwater extraction as detailed in the O&M Plan, a Closeout Plan for the groundwater extraction and treatment system at the Site will be prepared and submitted to USEPA and OEPA for approval.

#### **14.0 COMMUNITY RELATIONS**

SNFT will cooperate with USEPA and OEPA in providing information to the public. As requested by USEPA and OEPA, SNFT will participate in the preparation of and provide technical information to be disseminated to the public or to be used in public meetings which may be held or sponsored by USEPA or OPEA to explain activities at or concerning the Site. SNFT may take part in such meetings.

SNFT has employed a public relations consultant to assist SNFT with public relations and providing updated progress reports to the public on the performance of the RA. SNFT also has provided a Summit National Superfund Site information telephone contact to address any concerns or information required by the general public. The information telephone number is (216) 796-1348.

## **15.0 REMEDIAL ACTION SCHEDULE OF ACTIVITIES**

Based on the final design presented in the Final Design Report, and the RC Work Plan presented herein, implementation of the RA in accordance with the sequence of activities as presented on Figure 2 of the SOW has been modified. Figure 15.1 presents the overall RA Schedule of Activities for all phases of the remedial construction at the Site. The remedial action schedule of activities for each of the four phases of remedial construction also are presented on Figures 6.1, 7.1, 8.3 and 9.1 with the appropriate portions of the Consent Decree RA Schedule of Activities for ease of reference.

Due to unanticipated Site conditions at the time of negotiation of the Consent Decree (i.e. the requirements for pile foundations to support the proposed groundwater treatment facility, changes to the groundwater treatment process (i.e. from air stripping to bioreactor), and the limited space available at the Site to implement four phases of the RA concurrently (i.e. groundwater treatment system, groundwater extraction system, soil treatment and monitoring well/piezometer installations), it has been necessary to revise the construction periods and sequencing for the remedial construction activities to be conducted at the Site as presented in the Consent Decree. The revisions, as presented in the Schedule of Activities included as Figure 15.1, provide for the following:

- i) Groundwater Treatment System (12 months to system startup, compared to 300 days provided for in the Consent Decree schedule):
  - procurement of groundwater treatment system equipment - six months,
  - installation of groundwater treatment facility pile foundations including installation of steel piles (two weeks), construction of reinforced concrete ring beam (three weeks), and construction of reinforced concrete flooring and equipment foundations (four weeks) - nine weeks,

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### IMAGERY INSERT FORM

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<b>SITE NAME</b>	Summit National		
<b>DOC ID #</b>	128542		
<b>DESCRIPTION OF ITEM(S)</b>	map (Proposed remedial action schedule of activities)		
<b>REASON WHY UNSCANNABLE</b>	<u>  X  </u> <b>OVERSIZED</b>	<b>OR</b>	<u>      </u> <b>FORMAT</b>
<b>DATE OF ITEM(S)</b>	November 1992		
<b>NO. OF ITEMS</b>	1		
<b>PHASE</b>	REM		
<b>PRP</b>	Summit National Liquid Services		
<b>PHASE (AR DOCUMENTS ONLY)</b>	<u>      </u> Remedial <u>      </u> Removal <u>      </u> Deletion Docket <u>      </u> AR <u>      </u> Original <u>      </u> Update # <u>      </u> Volume <u>      </u> of <u>      </u>		
<b>O.U.</b>			
<b>LOCATION</b>	Box # <u>  2  </u> Folder # <u>  4  </u> Subsection <u>  K,N  </u>		
<b>COMMENT(S)</b>			

- relocation of stockpiled sediments and debris from the remedial activities completed in October, 1991 - two weeks, and
  - construction of the groundwater treatment building (three months) followed by installation of the groundwater treatment system equipment and controls (three months) - six months;
- ii) Groundwater Extraction System (12 months to commencement of groundwater extraction and an additional 6 months to complete commissioning, compared to 12 months to system startup and an additional two months to complete commissioning as provided for in the Consent Decree schedule):
- east pond dewatering and retaining wall relocation - two weeks, and
  - commencement of excavation for wet well installation to coincide with commencement of operation of the groundwater treatment system such that groundwater extracted during installation of the wet well and pipe and media drain can be treated by the on-site groundwater treatment system; and
- iii) Soil Removal and Treatment (12 months to mobilization and an additional 19 months to completion of soil remediation, compared to 10 and 24 1/2 months, respectively, provided for in the Consent Decree schedule):
- mobilization and Site preparation to commence after the groundwater treatment system contractor has demobilized.

Contractor procurement also has been rescheduled to commence on approval of the Final Design Report and RC Work Plan by USEPA and OEPA, which is consistent with the requirements of the Consent Decree.

The revisions to the RA Schedule of Activities do not change the overall RA completion period of approximately 42 months

provided for in the Consent Decree, but merely rearrange remedial construction activities to correspond to design and Site related conditions, and management of concurrent construction activities at the Site.